

**Appl. No. 09/684,488**  
**Amdt. dated October 29, 2003**  
**Reply to Office Action dated July 31, 2003**

**REMARKS/ARGUMENTS**

Applicants acknowledge receipt of the Office Action dated July 31, 2003. In that action, the Examiner: 1) rejected claims 1-10 as allegedly failing to fulfill the written description requirement; 2) rejected claims 1-10 as allegedly failing to comply with the enablement requirement; and 3) rejected claims 1-10 as allegedly unpatentable over *Guha* (U.S. Patent No. 6,092,072).

With this response, Applicants cancel claims 1-10 and present new claims 21-30. Reconsideration is respectfully requested.

**I. SECTION 112 WRITTEN DESCRIPTION REJECTION**

The Manual of Patent Examining Procedures (MPEP) at Section 2163 states:

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.

MPEP 2163 (2100-159).

There is a strong presumption that an adequate written description of the claimed invention is present when the application is filed.

*Id.* (2100-160).

The claims currently pending in the application, claims 21-30, are directed to a system for clustering data that comprises a computer executing a program performing a plurality of steps. With regard to support for a computer, the specification states:

It is generally desirable to reduce the time needed to generate results (often referred to as the convergence rate) and **also reduce the amount of computer resources** needed to implement the clustering algorithm.

Specification, page 1, lines 13-14 (emphasis added). Indeed, the Examiner has admitted that one of ordinary skill in the art would recognize that a computer system is present in the disclosure.

**Examiner agrees that one of ordinary skill in the art can understand that a computer is being used...**

**Appl. No. 09/684,488**  
**Amdt. dated October 29, 2003**  
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Office Action dated July 31, 2003, page 4 (emphasis added). Moreover, the steps recited in the pending claims find direct support both in the originally presented claims (claims 1-10) as well as the specification.

Thus, Applicants respectfully submit that the pending claims are not invalid under the written description requirements of Section 112.

## **II. SECTION 112 ENABLEMENT REJECTIONS**

In forming the enablement rejection, the Office Action of July 31, 2003 makes the following statement:

Examiner holds that the claimed computer-readable medium and microprocessor are not described anywhere in the specification... the drawings and specification do not sufficiently support the newly claimed computer-readable medium or microprocessor.

Office Action dated July 31, 2003, pages 4-5. With this Response to Office Action, Applicants have cancelled claims 1-10. The currently pending claims (claims 21-30) are directed to systems that comprise a computer executing a computer program performing a plurality of steps. The computer finds support in the original specification, e.g., Specification, page 1, lines 14-15. Moreover, the Examiner has admitted that "one of ordinary skill in the art can understand that a computer system is being used..." Office Action dated July 31, 2003, page 4. The plurality of steps in the newly presented claims 21-30 are supported throughout the specification.

Based on the foregoing, Applicants respectfully submit that one of ordinary skill in the art, e.g. an experienced programmer, could make and use the system claimed.

## **III. STATUTORY SUBJECT MATTER**

Various claims of the original application, now cancelled, were rejected as allegedly being directed to non-statutory subject matter. With regard to the currently pending claims 21-30, the Examiner is reminded:

If the claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product...

Appl. No. 09/684,488  
Amdt. dated October 29, 2003  
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A claim limited to a machine or manufacture, which has a practical application in the technological arts is statutory.

MPEP 2106 (IV)(B)(2)(a)(2100-14).

#### IV. CLAIM REJECTIONS

In the Office Action dated July 31, 2003, all the claims were rejected over *Guha*.

Applicants respectfully submit that the *Guha* reference fails to teach or render obvious the limitations of the claims. In responding to arguments presented in the Preliminary Amendment, the following statements are made:

Examiner holds that this disclosure teaches that C is used to determine which points are selected (moved) to represent a merged cluster. Examiner has interpreted the above choosing or selecting to be equivalent to the claimed moving.

Office Action of July 31, 2003, page 3. Applicants respectfully disagree.

The *Guha* reference may teach that only pairs of clusters should be merged. "[E]ach successive step merges the **closest** pair of clusters ..." *Guha*, Col. 6, lines 50-51 (emphasis added).

[S]tarting with the individual points as individual clusters, at each step the **closest** pair of clusters is merged to form the new cluster. The process is repeated until there are only k remaining clusters.

*Guha*, Col. 7, lines 18-21 (emphasis added). "At step 209, the merge procedure ... is used to merge the **closest** pair of cluster u and v ..." *Guha*, Col. 8, lines 17-19 (emphasis added). Thus, each time *Guha* merges (moves) clusters, all the points in the two clusters are merged, not a number c of those points.

The c parameter of *Guha* comes into play when determining which two clusters to move. The decision of which clusters to move is based on a "distance" between the clusters.

In order to compute the distance between a pair of clusters, for each cluster, representative points are stored. These [representative points] are determined by first choosing a constant number c of well scattered points within the cluster, and then shrinking them toward the mean of the cluster by a fraction  $\alpha$ . ... Thus, only the c representative points of a cluster are used to compute the distance from the other clusters.

**Appl. No. 09/684,488**  
**Amdt. dated October 29, 2003**  
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*Guha*, Col. 6, lines 52-61. Thus, the c well scattered points are used to determine the distance from other clusters.

Claim 21, by contrast, calls for receiving into the computer a size parameter **for specifying the number of data points to be moved at one time**. Claim 24 calls for evaluating subsets of data points (the number of data points specified by the size parameter (claim 22)), generating a value based on the subset of data points (claim 23), and **moving the subset of data points**. Applicants respectfully submit that *Guha* does not teach or fairly the limitations of the pending claims.

Based on the foregoing, Applicants respectfully submit that claim 21, and all claims which depend from claim 21 (claims 22-30), should be allowed.

#### **V. CONCLUSION**

Applicants respectfully request reconsideration and allowance of the pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

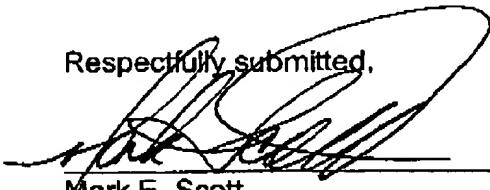
In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

**Appl. No. 09/684,488**  
**Amdt. dated October 29, 2003**  
**Reply to Office Action dated July 31, 2003**

Applicants respectfully request that a timely Notice of Allowance be issued  
in this case.

Respectfully submitted,



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